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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/418,690	10/14/1999	PRABHAS KEJRIWAL	04073.P006	9219

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EXAMINER	
JONES, PRENELL P	
ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/418,690

Applicant(s)
Kejriwal et al.

Examiner
Prenell Jones

Art Unit
2664



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 16, 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14 and 17-42 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 7-10, 15, and 16 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 2664

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claims 15 and 16 are objected to because of the following informalities: Regarding claim 15, Applicant is claiming on page 3, line 3, "wherein at least of said" which appears to be missing a word or two for clarification of the claimed limitation. Claim 16 depends on claim 15, therefore, claim 16 is objected to as well. Appropriate correction is required.

Art Unit: 2664

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 4, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma et al in view of Lyles et al and Ramakrishnan et al.

Regarding claims 1 and 4-6, Varma discloses (Abstract, col. 1, line 13 thru col. 2, line 55, col. 4, line 10 thru col. 5, line 16, col. 6, line 26 thru col. 8, line 34) traffic management in an ATM switch (packet organizer) and associated output port is coupled to multiple memory

Art Unit: 2664

devices/queues for storing data wherein that the ATM utilizes a scheduler for maintaining traffic continuity, controller/scheduler is coupled to multiple memory, ATM support various service classes wherein priority mechanism associated with round robin separates traffic classes from each other whereby CBR traffic class is given the highest priority and the remaining classes (VBR, ABR, UBR) are given lower priority, (col. 7, line 15-35) queues divided into groups where queues in a first group are served using WFQ scheduling and queues in remaining groups are serviced using round robin technique. Varma further discloses (Fig. 1, col. 7, line 35 thru col. 8, line 28) a buffer associated with an ATM switch is coupled to a controller/scheduler. Varma is silent on second locations coupled to a scheduler via a round robin pointer. In analogous art, Lyles discloses an output queued routing mechanism (Abstract, col. 12, line 45 thru col. 13, line 36, Fig. 6, col. 10, line 66 thru col. 12, line 14) packets are delivered to the output port of an ATM (output packet organizer), plurality priority output FIFO queues, round robin servicing, queues coupled to scheduler and memory pointers associated with queues, and Ramakrishnan discloses (Fig. 2 & 3, col. 7, line 61 thru col. 8, line 18, col. 14, line 12-24) multiple queues, scheduler, round robin pointers used to implement scheduler wherein queues are coupled to a control logic device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement queue locations coupled indirectly/directly to a scheduler by the way of round robin pointers as taught by the combined teachings of Lyles and Ramakrishnan with the teachings of Varma for the purpose of further of accessing scheduled/priority queues and associated data to alleviate contention in a system.

Art Unit: 2664

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Varma et al in view of Lyles et al and Ramakrishnan et al as applied to claim 1 above, and further in view of Daniel et al.

Regarding claim 5, Varma discloses (Abstract, col. 1, line 13 thru col. 2, line 55, col. 4, line 10 thru col. 5, line 16, col. 6, line 26 thru col. 8, line 34) traffic management in an ATM switch (packet organizer) and associated output port is coupled to multiple memory devices/queues for storing data wherein that the ATM utilizes a scheduler for maintaining traffic continuity, controller/scheduler is coupled to multiple memory, ATM support various service classes wherein priority mechanism associated with round robin separates traffic classes from each other whereby CBR traffic class is given the highest priority and the remaining classes (VBR, ABR, UBR) are given lower priority, (col. 7, line 15-35) queues divided into groups where queues in a first group are served using WFQ scheduling and queues in remaining groups are serviced using round robin technique. Varma further discloses (Fig. 1, col. 7, line 35 thru col. 8, line 28) a buffer associated with an ATM switch is coupled to a controller/scheduler, Lyles discloses an output queued routing mechanism (Abstract, col. 12, line 45 thru col. 13, line 36, Fig. 6, col. 10, line 66 thru col. 12, line 14) packets are delivered to the output port of an ATM (output packet organizer), plurality priority output FIFO queues, round robin servicing, queues coupled to scheduler and memory pointers associated with queues, and Ramakrishnan discloses (Fig. 2 & 3, col. 7, line 61 thru col. 8, line 18, col. 14, line 12-24) multiple queues, scheduler, round robin

Art Unit: 2664

pointers used to implement scheduler wherein queues are coupled to a control logic device.

Varma, Lyles and Ramakrishnan are silent on packet pipeline coupled to locations. In analogous art, Daniel discloses (col. 4, line 48-64) in an ATM system there exist virtual connections such as virtual pipelines connecting users of a network wherein each pipeline serves more than one pair of users. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement a packet pipeline coupled to a first and second locations as taught by Daniel with the combined teachings of Varma, Lyles and Ramakrishnan for the purpose providing a path for transmitted packets to users at multiple locations.

Allowable Subject Matter

6. Claims 2, 3 and 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2 and 3, the limitation, “a third location, having a higher priority than first adj location, and fourth location having a higher priority than a second location” is absent from the art.

Art Unit: 2664

Regarding claim 7, the limitation, “configuring first location for a percentage of scheduler’s resources” is absent from the art.

Regarding claim 8, the limitation, “configuring a plurality of second locations for a percentage of scheduler’s resources” is absent from the art.

Regarding claim 9, the limitation, “consuming a percentage of first second location’s servicing with packet identifiers from first location if first location has packet identifiers that exceed first location’s configured for percentage of scheduler resources.

7. Claims 11-14 and 17-42 are allowed over prior art.

Regarding claims 11 and 26, the limitation “high priority packet identifier, a scheduler that services locations according to a plurality of scheduling cycles, wherein said first location and one of said n time slot locations can be serviced for each of scheduling cycles, such that, n of said scheduling cycles results in said first location being serviced n times and said n time slot locations each being serviced one time, said servicing of a said location causing removal of a said packet identifier stored therein, said removal of a said packet identifier stored therein causing sending of a packet identified by said packet identifier from said packet buffer to said networking line, wherein each of said scheduling cycles corresponds to an output rate defined by an amount

Application/Control Number: 09418690

Page 8

Art Unit: 2664

of packet data sent from said packet buffer per unit of time" is absent from the art. Claims 12-14 and 27-42 depend on claims 11 and 26 respectively, therefore, claims 12-14 and 27-42 are allowed as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell Jones whose telephone number is (703) 305-0630. The examiner can normally be reached on Monday thru Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (703) 305-4366. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Prenell Jones

March 13, 2003

A handwritten signature in cursive script, appearing to read "Prenell Jones", written over the typed name and date.